RAADHES CHANDALURU | CS22B069

3rd Year Computer Science & Engineering IIT Madras
Incoming *Optiver* Spring Trading Intern 2025 at Amsterdam
Tower Research Capital **C++ Dev & Research Winter Intern 2024**
📖 **CGPA: 9.76/10**   GitHub ⤢   LinkedIn ⤢

🎓 Education

- **Indian Institute of Technology Madras** — 📍 Chennai, TN
  B. Tech - CSE: **CGPA: 9.76/10** — 📅 *Nov '22 - May '26*
- **FIITJEE Junior College & School, Madhapur** — 📍 Hyderabad, TS
  Class 12: **97.16%**; Class 10: **CGPA: 10/10** — 📅 *May '19 - Jun '22*

☰ Key Projects

Undergraduate Research Project
Project under **Prof. KC Sivaramakrishnan**   📅 *Nov '24 - May '25*
- Working with the **OCaml** garbage collector with the aim to analyze performance by integrating different algorithms.

Cache Oblivious Algorithms ⤢
Project under **Programming Club, C**F**I**   📅 *May '23 - Apr '24*
- Implemented matrix multiplication using **tiling optimization**, achieving a maximum time improvement of 64.5% on matrices of size 1500 x 1500.
- Implemented the **Cache Oblivious Priority Queue** based upon a **research paper** and tested it upon Dijkstra and Prims algorithms.

CPU Design from Logic Gates ⤢
Course Project under **Prof. Ayon Chakraborty**   📅 *Jul '23 - Nov '23*
- Designed a 8 bit CPU with 12 instruction ISA to perform 8 bit operations with custom ALU supporting 5 operations on CircuitVerse.
- Formed modules for CPU Controller generating 21 bit control bits, Instruction register, Program Counter, and Instruction decoder.

Data Science ⤢
Course Project under **Prof. M Ramanathan**   📅 *Jan '24 - May '24*
- Implemented models for **Generic Neural Network, K means Clustering, Logistic Regression, Linear Regression** from scratch.
- Utilised sklearn **Support Vector Classifier** model to classify digit images with 99% accuracy and the Iris dataset with 79% accuracy.

Matching Engine for Market ⤢
Personal Project   📅 *Jun '24 - Jul '24*
- Implemented a simple matching engine for a market server and created a terminal based client to place buy & sell orders. (Used Java)

Backend and UI for games
Personal Mini Projects   📅 *Aug '18 - Jul '24*
- Implemented an **unbeatable** tic-tac-toe bot with an original algorithm. ⤢
- Built a browser playable 2048 game using javascript, HTML and CSS. ⤢
- Simple Mario PC game with integrated mechanics using the Pygame library. ⤢

🏛 Coursework

Computer Science
- Design and Analysis of Algorithms
- Programming and Data Structures
- Object-Oriented Programming Lab
- Foundations of Computer System Design
- Computer Organisation and Architecture
- Database Management Systems**
- Compiler Design
- Operating Systems
- Paradigms of Programming
- Machine Learning
- GPU Programming**
- Networking**

Mathematics
- Probability, Statistics and Stochastic Processes
- Multivariable Calculus
- Basic Graph Theory
- Series and Matrices
- Discrete Mathematics

Others
- Accounting and Finance for Engineers
- Econometrics**
- Principles of Economics

** : Ongoing Semester (Jan '25 - May '25)

</> Skills

- **Languages**: C++, C, Python, RISC V asm, OCaml, LaTeX;
  Familiar with: HTML, Java, JavaScript, HDL Verilog (basics), x86 asm.
- **Miscellaneous**: C++ STL; Flex & bixon; Git;
  Familiar with: Gdb, Numpy, Pandas, Matplotlib, Scikit-Learn.

▣ Coding Achievements

- **Highest Rated 3rd year student at IITM** on Codeforces with a rating of **1942 (Candidate Master)**. ⤢
- Max Rating of **2062 (5 Star)** on CodeChef. ⤢
- Selected for **ICPC Asia West Continental Finals** Mar '25.
- **Team Rank 17** in ICPC Amritapuri Regionals. Only 2026 graduating team to ever be selected for regionals from IITM.
- Secured **India rank 10** and **Global rank 85** among **10K+** participants in Codeforces Round 896 (Div 2).
- Secured **India rank 14** and **Global rank 104** among **15K+** participants in Codeforces Round 945 (Div 2).
- Secured **Team Rank 1** in Freshie Programming Contest 2022, and **Rank 4** in Apprenticeship Coding contest '22 - '23 conducted by Programming Club IITM.
- Qualifed for phase 2 of MetaHackerCup in 2023 and 2024.

🏆 Scholastic Achievements & Others

- **Department Rank 3** among 100 CS22B' students.
- **Highest Score** in **System Design** and **Computer Organisation & Arch.** courses (among all CS22B' students).
- **AIR 16** in KVPY 2020 among **50K+** students.
- **AIR 143** in **JEE Adv.** '22 among **150K+** candidates.
- **AIR 310** in **JEE Mains** '22 among **1 million+** candidates.
- **Regional Rank 1, All India Rank 3** among **16K+** participants in NAEST round 2 and finals respectively (Experimental Physics test).
- Conferred Shilpa Nanda Kumar Award by HC Verma on behalf of IAPT.
- Secured **Rank 3** in Telangana state in NTSE Stage - 1. Awarded NTSE scholarship based on NTSE stage - 2.
- **Top 30** in Telangana State in IOQM 2021 and selected for INMO (Indian National **Mathematical Olympiad**).
- Secured **India Rank 4**, **Global Rank 15** and **India Rank 2**, **Global Rank 28** in Physics Brawl Charles University 2022, 2023 among 3.5K+ contestants Globally.
- Secured **Team Rank 3** in AI to AI mathematics contest '22 - '23 based on probability and linear algebra at IITM.
- **Invite-Only** Course: **Akuna Capital** Options 201. ⤢
- Admitted as Research Consultant WorldQuant Brain.
- Improved 15+ basic alpha strategies on websim.

🛠 Jane Street SEE : Hong Kong SAR

- **Among 6** students selected for the program from IIT Madras. (Among approx. 50 from IITB, IITD, IITM)
- OCaml to build the backend and UI for a Game.
- Learnt Jane Street's quantitative approach to trading through short lectures, mock trading games, and trading research workshops.

☰ Positions Of Responsibility

Programming Club, C**F**I
Strategist   📅 *Apr '24 - Present*
Coordinator   📅 *May '23 - Apr '24*
- Instructed **500+** attendees in SPC 2023 on the topics of greedy algorithms, prefix sums, frequency arrays
- **Automated coordinator practice tracking** by developing a **Python script** integrated with Codeforces API.
- Set and tested original problems for 10+ coding contests.
- Instructed over 150 students through offline sessions on topics of Strings and Range Queries
- Managing club Youtube channel with **149K+ views & 4.5K+ subscribers**. Co-created 15+ editorials in tenure.

CS Placement & Internship Cell, IIT Madras
Deputy Coordinator   📅 *May '23 - Apr '24*
- Assisted 10 students during Internships and Placement drives to facilitate smooth information transfer process.
- Ensured smooth coordination with 7 companies during internship & placement drive outreach and interviews.